

### **REMARKS/ARGUMENTS**

Claims 1 - 52 are pending. Claims 1 - 52 are rejected. Claims 1-2, 6, 11-12, 16, 20-21, 23-25, 27-45, 48, 50-52 are amended herein.

As discussed below, all of the claims are in condition for allowance. **But if after considering this response, the Examiner does not allow all of the claims, then the Applicant's agent formally requests that the Examiner contact him to schedule and conduct a telephone interview before issuing a subsequent office action.**

### **Objections to the Drawing**

The amendment to FIG. 3 was not entered. Therefore there is no need to cancel the amendment.

### **Rejection of Claims 1-52 Under 35 U.S.C. § 112 ¶1 As Failing to Comply With Written Description Requirement**

Claims 1-2, 6, 11-12, 16, 20-21, 23-25, 27-45, 48, 50-52 have been amended to comply with the written description requirement. While the Applicant's agent believes that the use of the term "transmission period" is understandable to anybody of ordinary skill in the art and is inherent in view of the specification and figures, the term has been eliminated from the claims in the interest of progressing to allowance. The term "transmission time", and more specifically "transmission time equal to a clock time minus a time stamp", has been substituted for the term "transmission period."

The Examiner is respectfully directed to FIG. 3 and to numerous places in the specification for support. Specifically, the Examiner is directed to paragraph 0039 for a specific example of use of the term "transmission time." A transmission time is the time for transmission of a data packet from a server to a client computer, and may be calculated as the difference between the time of receipt of a data packet and the time of transmission of the data packet.

The Applicant's agent respectfully asserts that the amended language is now

unambiguously supported by written description in the specification and figures. The term “transmission time,” used in this context, has the same meaning as the term “transmission period,” which was apparently chosen to avoid confusion with the moment of data transmission indicated by the time stamp.

**Rejection of Claims 1-4, 6-9, 11-14, 16-18, 20-23, 25, 27, 30, 33, 34, 36, 37, 40-42, 44, 45, 48, 50-52 Under 35 U.S.C. § 102(e) Over Ravikanth (U.S. Pat. No. 6,327,274)**

**Claim 1**

Claim 1 recites a method for determining network conditions comprising determining a transmission time associated with a data packet, subtracting a base time from the transmission time to determine a transmission latency, and modifying the base time in response to the transmission latency being less than zero.

For example, with reference to FIG. 3, step 304:

$$\text{LATENCY} = \text{CLOCK TIME} - \text{BASE TIME} - \text{TIME STAMP}.$$

Since  $\text{TRANSMISSION TIME} = \text{CLOCK TIME} - \text{TIME STAMP}$ , this equation reduces to:

$$\text{LATENCY} = \text{TRANSMISSION TIME} - \text{BASE TIME}.$$

Moreover, with respect to FIG. 3, steps 308 and 310:

IF  $\text{LATENCY} < 0$ , THEN  $\text{BASE TIME} = \text{BASE TIME} - \text{LATENCY}$ , thus satisfying the recited limitation “modifying the base time in response to the transmission latency being less than zero.”

It may be noted that an effect of the operation “IF  $\text{LATENCY} < 0$ , THEN  $\text{BASE TIME} = \text{BASE TIME} - \text{LATENCY}$ ” is to set the base time equal to the minimum measured packet transmission time between the server and the client. This characterizes the best observed network performance as  $\text{BASE TIME}$ , and provides a value to which future observed performance may be compared via simple subtraction as  $\text{LATENCY}$ .

As explained above (and fully explained by the specification and drawings of the application), “the base time *initially* represents a time interval associated with the time

taken by the first data packet to be sent by the server computer 110 and received by the client computer 112.” [para. 0034] That is, the base time is the difference between the time the packet is sent and the time the packet is received. The base time is then subject to recalculation if subsequent packets require less time to travel from the server to the client. In other words, the base time is the minimum or fastest observed transmission time.

In contrast, Ravikanth does not disclose comparing an observed transmission time to the best previously-observed transmission time (base time). Ravikanth also does not disclose subtracting the base time from the transmission time to determine latency. Moreover, Ravikanth also does not disclose maintaining the best previously-observed transmission time by modifying the base time in response to a calculated latency being less than zero.

Ravikanth apparently discloses maintaining statistics related to data transmission, but not any minimum data transmission time: “...a first averager averages jitters after transmitting the plurality of packets; and a second averager averag[es] inter-packet times ... clock skew is determined by dividing an average of the jitters by an average of the inter-packet times.” [Ravikanth column 2, lines 35 - 41]

For reasons explained above, the “base time” referenced by the Examiner as being disclosed by Ravikanth is not the same as the term in the claims of the present application (nor indeed does Ravikanth use the term “base time”). This rejection appears to have confused the time of transmission from the server with the time interval required for transmission from the server to the client, i.e., the “transmission time.”

Moreover, Ravikanth does not disclose (nor does the Examiner apparently contend that Ravikanth discloses) modifying the (undisclosed) base time responsive to calculating a latency less than zero. Ravikanth apparently does not track the fastest observed transmission time between the server and the client.

Rather than determining network conditions using simple subtraction, Ravikanth relies on computation-intensive averaging, and also apparently does not provide a latency result.

Thus, Ravikanth fails to disclose all the limitations of claim 1, and claim 1 is allowable over Ravikanth.

**Claims 6, 11, 16, 20, 27, 37, and 45**

Claims 6, 11, 16, 20, 27, 37, and 45 are allowable for reasons similar to those given for claim 1.

**Claim 2**

Claim 2 recites, in part, “modifying the time of the timestamp to account for any clock skew.”

Claim 2 is allowable by virtue of its dependence from claim 1 and for at least the reasons given for claim 1.

Moreover, Ravikanth does not disclose modifying the timestamp at the location cited by the Examiner. Ravikanth discloses what clock skew is and notes that it is important to detect, but apparently does not disclose modifying the timestamp to account for clock skew. Claim 2 is therefore also allowable for at least this additional reason.

**Claims 12, 21, 23, 25, 33, 34, 36, 41, 42, and 44**

Claims 12, 21, 23, 25, 33, 34, 36, 41, 42, and 44 are allowable by virtue of their dependence from their respective independent claims and for at least reasons similar to those given for claim 1. Moreover, claims 12, 21, 23, 25, 33, 34, 36, 41, 42, and 44 are allowable for reasons similar to the additional reasons given for claim 2.

**Claim 3**

Claim 3 recites, in part, “reporting to a software module the transmission latency.”

Claim 3 is allowable by virtue of its dependence from claim 1 and for at least the reasons given for claim 1.

Moreover, Ravikanth does not disclose, for reasons describe above, even determining a latency, wherein the latency is a difference between a recent transmission time and the base time. Therefore, Ravikanth also does not disclose reporting the transmission latency to a software module. Claim 3 is therefore also allowable for at least this additional reason.

**Claims 7, 8, 13, 17, 22**

Claims 7, 8, 13, 17, 22 are allowable by virtue of their dependence from their respective independent claims and for at least reasons similar to those given for claim 1. Moreover, claims 7, 8, 13, 17, 22 are allowable for reasons similar to the additional

reasons given for claim 3.

**Claims 4, 9, 14, and 18**

Claims 4, 9, 14, and 18 are allowable by virtue of their dependence from their respective independent claims and for at least reasons similar to those given for claim 1.

**Claims 30, 40, and 48**

Claims 30, 40, and 48 are allowable by virtue of their dependence from their respective independent claims and for at least reasons similar to those given for claim 1.

**Claim 50**

Claim 50 recites, in part, “determining the base time using a transmission time of one or more previously-sent data packets.”

Claim 50 is allowable by virtue of its dependence from claim 1 and for at least the reasons given for claim 1.

Moreover, as described above, Ravikanth does not disclose determining a base time. Therefore, Ravikanth also does not disclose determining the base time using a transmission time of one or more previously-sent data packets. Claim 50 is therefore also allowable for at least this additional reason.

**Claims 51 and 52**

Claims 51 and 52 are allowable by virtue of their respective dependence from claims 6 and 20, and for at least reasons similar to those given for claim 1. Moreover, claims 51 and 52 are allowable for reasons similar to the additional reasons given for claim 50.

**Rejection of Claims 5, 8, 10, 15, and 19 Under 35 U.S.C. § 103(a) Over Ravikanth**

Claims 5, 8, 10, 15, and 19 are allowable by virtue of their dependence from their respective independent claims, and for at least reasons similar to those given for claim 1.

In the event additional fees are due as a result of this amendment, the Commissioner is hereby authorized to charge any deficiency of fees submitted herewith, or credit any overpayment, to Deposit Account No. 07-1897.

If the Examiner believes that a telephone interview would be helpful, he is respectfully requested to contact the Applicant's agent at (425) 455-5575.

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Respectfully submitted,

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